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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/804,265

03/18/2004

Nikhil Jain

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QUALCOMM INCORPORATED
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EXAMINER

TAYLOR, BARRY W

ART UNIT

PAPER NUMBER

2617

NOTIFICATION DATE

DELIVERY MODE

05/21/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/804,265	Applicant(s) JAIN ET AL.	
	Examiner Barry W. Taylor	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11,14-16,18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-11, 14-16, 18, and 20-22 is/are rejected.
- 7) ☒ Claim(s) 23 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-2, 4-11, 14-16, 18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn et al (6,681,111 hereinafter Ahn) found in co-pending application 10/077,556 now abandoned in view of Murtagh et al (2004/0133623 hereinafter Murtagh) further in view of Bertrand et al (6,408,173 hereinafter Bertrand).

Regarding claim 1. Ahn teaches a general global gateway, between a first network and a second network (see item 300 in figures 1 and 3 wherein a general global gateway is located between a first and second network and used for

authenticating the mobile, which is currently registered to GSM network, but visiting a CDMA system), configured to support communications between the first network and the second network (see CDMA and GSM figure 1) to enable a mobile station subscribed in the first network to communicate using the second network (title, abstract, col. 2 lines 36 – 46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47), comprising:

a database configured to store an identity of the mobile station (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47); and

a logic unit configured to execute program logic to obtain authentication information from the first network based on the identity of the mobile station (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47) and further configured to determine whether authentication parameters from the MS satisfy GGG authentication criteria (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47).

According to Applicants, Ahn only shows a CDMA terminal with a GSM SIM card to provide roaming access to a GSM service subscriber in the CDMA area but does not show using the CDMA network for this purpose (see Applicants remark at the bottom of page 7, paper dated 2/28/08).

Murtagh teaches using a virtual mobile node to allow CDMA operator the ability to offer services to subscribers of GSM network (abstract, paragraphs 0002, 0031).

Murtagh teaches the virtual mobile node (see VM in figures 3 and 4) connected to an interworking gateway (see MAR in figure 3 and 4) wherein the virtual mobile node contains both GSM HLR and MSC functions (see figures 3 and 4, paragraphs 0033 and 0041) which means that CDMA operator can offer services to subscribers of the GSM network (paragraph 0033) and visa versa (paragraph 0034).

It would have been obvious for any one of ordinary skill in the art at the time of the invention was made to modify the gateway as taught by Ahn to include both GSM HLR and MSC functions as taught by Murtagh in order to allow CDMA operators the ability to offer its subscribers SMS messages from other mobile users equipped with different technology handsets as taught by Murtagh (paragraph 0031).

Ahn in view of Murtagh do not explicitly show the MS can be authenticated by the GGG without contacting the first network wherein the GGG appears as a visitor location register to both networks.

Bertrand teaches a mobility gateway that appears as a visitor location to a first and second network (title, abstract, figure 4, see col. 4 lines 32-53 wherein the message from the mobility gateway appears to come from HLR from the point of view of the VLR and appear to come from a VLR from the point of view of the HLR) enabling billing records associated with the GSM subscriber that has roamed into another network to be properly tracked and accounted for (col. 4 lines 54-62).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify the gateway as taught by Ahn in view of Murtagh to act as a VLR as

taught by Bertrand so that a subscriber of one network can be properly tracked and billed for calls in another network as disclosed by Bertrand.

Regarding claim 2. Ahn further shows a location register configured to store a location of the MS to enable a call incoming to the MS from the first network to route the incoming call to the MS through the GGG (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47). Murtagh also show using location register so incoming calls from first network can be routed through the gateway (see VM and MAR in figures 3 and 4, paragraphs 0033 and 0041).

Regarding claim 4. Ahn teaches a service center configured to send and receive messages to and from the second network according to a message format of the service center (i.e. Ahn describes a short message service (SMS) of the roaming service where the IRGS functions as the SMC/short message center --- col. 12 lines 39-42). Murtagh teaches a virtual mobile node has a pseudo HLR and a pseudo MSC which functions as a service center to transfer messages between an entity in a foreign network having a different technology to an SMS entity connected to the local network wherein both pseudo HLR and pseudo MSC are both located in the home network but operate with the protocol of the foreign network (abstract).

Regarding claim 5. Ahn teaches a second location register configured to store location of the MS to enable a call outgoing from the MS to the first network to route the outgoing call from the MS through the GGG (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47).

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Murtagh also teaches using location registers (see paragraphs 0033 and 0041, see virtual mobile node item 22 in figure 4 containing location registers so GSM and CDMA maybe interconnected).

Regarding claim 6. Murtagh teaches using IP to send and receive messages (paragraph 0031).

Regarding claim 7. Ahn teaches the service center is a short message service center (i.e. Ahn describes a short message service (SMS) of the roaming service where the IRGS functions as the SMC/short message center --- col. 12 lines 39-42). Murtagh also teaches SMS messaging (title, abstract) so as to provide SMS services to subscribers of GSM network (paragraphs 0002 and 0031).

Regarding claim 8. Ahn teaches wherein the messages deliver services that are provided by the first network that may not be provided by the second network (col. 1 lines 44-54). Murtagh also teaches the messages delivered by the first network that may not be provided by the second network (paragraphs 0002 and 0031).

Regarding claim 9. Ahn teaches wherein the SMSC is configured to send and receive SMS messages to validate a subscription in a network (i.e. Ahn describes a short message service (SMS) of the roaming service where the IRGS functions as the SMC/short message center --- col. 12 lines 39-42). Murtagh also teaches service center/gateway mobile switching center uses SMS messages to validate subscribers (paragraphs 0039-0041, 0047).

Regarding claim 10. Ahn teaches a general global gateway, between a first network and a second network (see item 300 in figures 1 and 3 wherein a general

global gateway is located between a first and second network and used for authenticating the mobile, which is currently registered to GSM network, but visiting a CDMA system), configured to support communications between the first network and the second network (see CDMA and GSM figure 1) to enable a mobile station subscribed in the first network to communicate using the second network (title, abstract, col. 2 lines 36 – 46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47), comprising:

means for storing an identity of the mobile station (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47); and

means for executing program logic to obtain authentication information from the first network based on the identity of the mobile station (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47) and determine whether authentication parameters from the MS satisfy GGG authentication (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47).

According to Applicants, Ahn only shows a CDMA terminal with a GSM SIM card to provide roaming access to a GSM service subscriber in the CDMA area but does not show using the CDMA network for this purpose (see Applicants remark at the bottom of page 7, paper dated 2/28/08).

Murtagh teaches using a virtual mobile node to allow CDMA operator the ability to offer services to subscribers of GSM network (abstract, paragraphs 0002, 0031).

Murtagh teaches the virtual mobile node (see VM in figures 3 and 4) connected to an interworking gateway (see MAR in figure 3 and 4) wherein the virtual mobile node contains both GSM HLR and MSC functions (see figures 3 and 4, paragraphs 0033 and 0041) which means that CDMA operator can offer services to subscribers of the GSM network (paragraph 0033) and visa versa (paragraph 0034).

It would have been obvious for any one of ordinary skill in the art at the time of the invention was made to modify the gateway as taught by Ahn to include both GSM HLR and MSC functions as taught by Murtagh in order to allow CDMA operators the ability to offer its subscribers SMS messages from other mobile users equipped with different technology handsets as taught by Murtagh (paragraph 0031).

Ahn in view of Murtagh do not explicitly show the MS can be authenticated by the GGG without contacting the first network wherein the GGG appears as a visitor location register to both networks.

Bertrand teaches a mobility gateway that appears as a visitor location to a first and second network (title, abstract, figure 4, see col. 4 lines 32-53 wherein the message from the mobility gateway appears to come from HLR from the point of view of the VLR and appear to come from a VLR from the point of view of the HLR) enabling billing records associated with the GSM subscriber that has roamed into another network to be properly tracked and accounted for (col. 4 lines 54-62).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify the gateway as taught by Ahn in view of Murtagh to act as a VLR as

taught by Bertrand so that a subscriber of one network can be properly tracked and billed for calls in another network as disclosed by Bertrand.

Regarding claim 11. Ahn teaches means for storing a location of the MS to enable a call incoming to the MS from the first network to route the incoming call to the MS through the GGG (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47).). Murtagh also show using location register so incoming calls from first network can be routed through the gateway (see VM and MAR in figures 3 and 4, paragraphs 0033 and 0041, see virtual mobile node item 22 in figure 4 containing location registers so GSM and CDMA maybe interconnected).

Regarding claim 14. Ahn further shows a location register configured to store a location of the MS to enable a call incoming to the MS from the first network to route the incoming call to the MS through the GGG (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47). Murtagh also teaches using location registers (see paragraphs 0033 and 0041, see virtual mobile node item 22 in figure 4 containing location registers so GSM and CDMA maybe interconnected).

Method claim 15 is rejected for the same reasons as apparatus claim 1 since the recited apparatus would perform the claimed method steps.

Method claim 16 is rejected for the same reasons as apparatus claim 2 since the recited apparatus would perform the claimed method steps.

Regarding claim 18. Ahn teaches communicating directly from the MS to the first network after the MS has been authenticated (col. 2 lines 36-46).

Method claim 20 is rejected for the same reasons as apparatus claim 2 since the recited apparatus would perform the claimed method steps.

Computer claim 21 is rejected for the same reasons as apparatus claim 1 and method claim 15 since the recited apparatus and method would perform the claimed program steps.

Regarding claim 22. Ahn teaches a processor (see processor 300 in figure 1 connecting to CDMA and GSM to enable a mobile station subscribed in the first network to communicate using the second network) comprising: a processing circuit configured to store an identity of the mobile station; obtain authentication information from the first network based on the identity of the mobile station; store the authentication information from the first network in a general global gateway (GGG), between a first network and a second network (see item 300 in figures 1 and 3 wherein a general global gateway is located between a first and second network and used for authenticating the mobile, which is currently registered to GSM network, but visiting a CDMA system), for subsequent accesses by the mobile station; use the stored authentication information from the first network to authenticate the mobile station; and determine whether authentication parameters from the mobile station satisfy GGG authentication criteria (see 300 figure 1, col. 2 lines 36-46, col. 3 lines 62-65, col. 4 lines 17-33, col. 5 lines 28-46, col. 6 lines 32-54, col. 12 lines 39-47).

According to Applicants, Ahn only shows a CDMA terminal with a GSM SIM card to provide roaming access to a GSM service subscriber in the CDMA area but does not show using the CDMA network for this purpose (see Applicants remark at the bottom of page 7, paper dated 2/28/08).

Murtagh teaches using a virtual mobile node to allow CDMA operator the ability to offer services to subscribers of GSM network (abstract, paragraphs 0002, 0031). Murtagh teaches the virtual mobile node (see VM in figures 3 and 4) connected to an interworking gateway (see MAR in figure 3 and 4) wherein the virtual mobile node contains both GSM HLR and MSC functions (see figures 3 and 4, paragraphs 0033 and 0041) which means that CDMA operator can offer services to subscribers of the GSM network (paragraph 0033) and visa versa (paragraph 0034).

It would have been obvious for any one of ordinary skill in the art at the time of the invention was made to modify the gateway as taught by Ahn to include both GSM HLR and MSC functions as taught by Murtagh in order to allow CDMA operators the ability to offer its subscribers SMS messages from other mobile users equipped with different technology handsets as taught by Murtagh (paragraph 0031).

Ahn in view of Murtagh do not explicitly show the MS can be authenticated by the GGG without contacting the first network wherein the GGG appears as a visitor location register to both networks.

Bertrand teaches a mobility gateway that appears as a visitor location to a first and second network (title, abstract, figure 4, see col. 4 lines 32-53 wherein the message from the mobility gateway appears to come from HLR from the point of view of the VLR

and appear to come from a VLR from the point of view of the HLR) enabling billing records associated with the GSM subscriber that has roamed into another network to be properly tracked and accounted for (col. 4 lines 54-62).

It would have been obvious for any one of ordinary skill in the art at the time of invention to modify the gateway as taught by Ahn in view of Murtagh to act as a VLR as taught by Bertrand so that a subscriber of one network can be properly tracked and billed for calls in another network as disclosed by Bertrand.

Allowable Subject Matter

2. Claims 23 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

3. Applicant's arguments with respect to claims 1-2, 4-11, 14-16, 18, and 20-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

---(5,862,481) Kulkarni et al is considered pertinent for the mobile station can be authenticated by the GGG (see Inter-technology Roaming Proxy, col. 3 lines 24-32, col. 5 lines 10-23) without contacting the first network wherein the GGG appears as a VLR to both networks (col. 6 lines 4-9, lines 27-40 and **especially col. 7 lines 20-31**

wherein the GGG does not interact with the GSM network to authenticate a GSM terminal in another network).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry W. Taylor, telephone number (571) 272-7509, who is available Monday-Thursday, 6:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost, can be reached at (571) 272-7023. The central facsimile phone number for this group is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (571) 272-2600, the 2600 Customer Service telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Centralized Delivery Policy: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the central fax number **(571-273-8300)**.

/Barry W Taylor/
Primary Examiner, Art Unit 2617